

**Remarks/Arguments:**

Claims 1, 3, and 6 - 16 are pending.

Applicant thanks Examiner Oyeibisi for the courtesy extended to Applicant's representative during the telephone interview of April 3, 2007.

**Summary of Applicant's Arguments**

Applicant respectfully traverse the 35 U.S.C. §112, first paragraph rejection based on page 8, lines 1 - 21, generally and page 8, lines 14 - 19 of the original specification. Applicant also notes that it is well established that the subject matter of the claims need not be described literally in order for the disclosure to satisfy the description requirement. See MPEP § 2163.02. Regarding the rejection of claims 1, 3 and 6 - 16 under 35 U.S.C. §103(a), the prior art references fail to disclose an optimization module that generates optimized trading parameters so that at least one of the trading parameters is prevented from being included in the optimized trading parameters, according to an optimization technique and based on historical trading data. The prior art references also fail to disclose a multi-channel machine learning module that 1) further optimizes the optimized trading parameters from the optimization choice module based on trading results from real-time trading data and 2) generates buy/sell trading signals using the further optimized trading parameters. Applicant's arguments are more fully explained below.

**Rejections Under § 103**

Claims 1, 3, and 6 - 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kane (U.S. 6,317,728) in view of Freeny, Jr. (U.S. 6,594,643). This ground for rejection is respectfully traversed for the reasons set forth below.

Claim 1 includes features which are neither disclosed nor suggested by the cited art, namely:

...an optimization choice module, for each of the trading strategies, for generating optimized trading parameters, by selecting one or more of the number of respective trading parameters so that at least one of the respective trading parameters is prevented from being included in the optimized trading

parameters... according to an optimization technique, based on the historical trading data...

...a multi-channel machine learning module for independently generating respective self-optimized buy/sell trading signals for each of the trading strategies, by further optimizing the respective optimized trading parameters for each of the trading strategies, based on respective trading results from the real-time trading data... (Emphasis Added)

Claim 8 includes a similar recitation.

Kane discloses, in Fig. 1, a securities and commodities trading system that includes decision logic 14 composed of a plurality of agents 16. Agents 16 represent different buy and sell rules and the plurality of agents 16 collectively issue buy/sell suggestions for securities transactions. A buy long or a sell short decision is made by a voting algorithm that takes a vote of all decisions of all of agents 16. (Col. 5, lines 8 - 11 and lines 35 - 55). Each agent is assigned a different weight according to its success rate/failure rate and votes according to its assigned weight. (Col. 5, line 58 - Col. 6, line 4 and Col. 8, lines 35 - 49). Accordingly, Kane generates a decision using all of the agents 16.

As acknowledged by the Examiner, Kane does not disclose or suggest (1) a trading strategy building module for building a number of independent trading strategies and generating independent respective buy/sell trading signals, (2) an optimization choice module, for each trading strategy, for selecting trading parameters so that at least one of the trading parameters is prevented from being included in optimized trading parameters, according to an optimization technique and based on historical trading data, (3) a multi-channel machine learning module that further optimizes the optimized trading parameters based on real-time trading data and generates self-optimized buy/sell trading signals for each trading strategy or (4) a multi-channel automatic execution platform for transferring the self-optimized buy/sell trading signals for each trading strategy simultaneously through parallel programming connection channels, as required by claim 1. Thus, Kane does not include all of the features of claim 1.

Freeny discloses, in Fig. 1, an automated investment trading system 10 including individual trading computer 16 that receives investment data from data sources 20 and predetermined trading criteria from input unit 14. (Col. 2, lines 47 - Col. 3, line 22). Trading computer 16 automatically analyzes the investment data from data source 20 using the

predetermined trading criteria from input unit 14 and generates a trade request signal (Col. 3, lines 50 - 57). The trade request signal is provided to individual selected market trader 28 which executes at least a portion of the trade indicated in the trade request signal (Col. 3, lines 59 - 63 and Col. 4, lines 12 - 19). Freeny describes the predetermined trading criteria as including "instructions, such as buy and sell orders, or algorithms capable of being used to analyze investment data to generate a trade request to buy and/or sell" an investment item (Col. 3, lines 23 - 26) (emphasis added). Freeny also discloses that the market trader 28 may provide trading computer 16 with a trade confirmation signal. The trade confirmation signal may be used to modify the predetermined trading criteria in a predetermined manner by trading computer 16, based on the executed trade (Col. 4, lines 36 - 55).

Freeny does not disclose or suggest Applicant's claimed features of "an optimization choice module... selecting one or more of the number of respective trading parameters so that at least one of the trading parameters is prevented from being included in the optimized trading parameters... according to an optimization technique, based on the historical trading data" (emphasis added). These features are neither disclosed nor suggested by Freeny. Instead, Freeny describes generating trade request signals (i.e. buy/sell signals) based on predetermined trading criteria. Although Freeny describes modifying the predetermined trading criteria (used to generate buy/sell signals) based on a trade confirmation signal, Freeny is silent on an optimization choice module that generates optimized trading parameters so that at least one trading parameter is prevented from being included in the optimized trading parameters, using an optimization technique and based on historical trading data.

In addition, Freeny does not disclose or suggest Applicant's claimed features of "a multi-channel machine learning module for independently generating respective self-optimized buy/sell trading signals... by further optimizing the respective optimized trading parameters... based on... real-time trading data" (emphasis added). These features are neither disclosed nor suggested by Freeny. As discussed above, Freeny generates a trade request signal (i.e. a buy/sell signal) based on predetermined trading criteria. Freeny is silent on an optimization choice module and thus cannot disclose further optimizing trading parameters from an optimization choice module using real-time trading data in order to generate self-optimized buy/sell trading signals. Thus, Freeny does not include all of the features of claim 1. Accordingly, allowance of claim 1 is respectfully requested.

Claims 3, 6, and 7 include all of the features of claim 1 from which they depend. Accordingly, claims 3, 6, and 7 are also patentable over the cited art.

Claim 8, although not identical to claim 1, includes features similar to claim 1 which are neither disclosed nor suggested by the cited art. Namely, 1) an optimization choice module that selects one or more trading parameters so that at least one trading parameter is prevented from being included in the optimized trading parameters according to an optimization technique and based on historical data and 2) that a number of independent buy/sell trading orders are generated by self-optimizing the respective optimized trading parameters from the optimization choice module. As discussed above, these features are neither disclosed nor suggested by the cited art. Thus, the cited art do not include all of the features of claim 8. Accordingly, allowance of claim 8 is respectfully requested.

Claims 9 - 16 include all of the features of claim 8 from which they depend. Accordingly, claims 9 - 16 are also patentable over the cited art.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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